Amendments of the Claim:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): A method for virtually simulating actual networked applications within a network simulation, comprising the steps of:

providing, on each of a plurality of clients, ~~a~~ an actual networked application code and a client interface which communicates with the actual network application code;

providing a network simulator that simulates a network of communicating nodes;

providing a server that interfaces to the network simulator, the server comprising functionality for establishment of a bidirectional mapping of communications of said actual networked application codes to a simulated node in the network simulator, the client interfaces being aware of the server and communicating with the server over a network; the network simulator being able to interoperate with the server such that communication to the actual networked application code from the server appears to originate from the simulated node to which the actual networked application code is mapped; and

modifying, via the client interfaces and the server, the actual networked application code by removing or inserting messages to or from simulated nodes.

Claim 2 (Currently Amended): A method for virtually simulating actual networked applications within a network simulation, comprising the steps of:

initiating a server to interface to a network simulator;

initiating a plurality of client interfaces to interface with the server over a network, the client interfaces communicating with ~~a~~ networked application codes on a plurality of clients;

bridging the actual networked application code via the client interfaces so that the actual network application codes can communicate with the server;

mapping the communications of the actual networked application codes to a simulated node in the simulator, communication from the actual networked application codes now appearing to originate from the simulated node; and

insertion of and extraction of messages or packets from the actual networked application codes to the simulated node, or from the simulated node to the actual networked application codes, via the client interface and the server.

Claim 3 (Currently Amended): The method as recited in claim 2 wherein the step of initiating a server further comprises the step of establishing bidirectional mapping of the actual networked application codes to the simulated node in the network simulator.

Claim 4 (Original): The method as recited claim 1 wherein the network simulator is IP based.

Claim 5 (Original): The method as recited in claim 4 wherein the network simulator further comprises an upper layer protocol.

Claim 6 (Original): The method as recited in claim 5; wherein the protocol is selected from the group consisting of TCP and UDP upper layer protocols.

Claim 7 (Currently Amended): The method as recited in claim 1 wherein the actual networked application codes utilizes a communication style selected from the group consisting of point-to-point, anycast, multicast and broadcast.

Claim 8 (Original): The method as recited in claim 1 wherein the network simulator comprises a plurality of network simulators.

Claim 9 (Original): The method as recited in claim 1 wherein the server comprises a plurality of servers.

Claim 10 (Currently Amended): The method as recited in claim 1 wherein the mapping of actual networked application codes to the simulated node is dynamic.

Claim 11 (Original): The method as recited in claim 1 wherein the network simulator executes in real-time.

Claim 12 (Original): The method as recited in claim 1 wherein the execution time of the network simulator is configurable.

Claim 13 (Currently Amended): The method as recited in claim 1 wherein the client interfaces and the server are implemented on separate hardware.

Claim 14 (Currently Amended): The method as recited in claim 2 wherein the actual networked application codes are ~~is~~ executed in parallel over a distributed system.

Claim 15 (Original): The method as recited claim 2 wherein the network simulator is IP based.

Claim 16 (Previously Presented): The method as recited in claim 15 wherein the network simulator further comprises a protocol selected from the group consisting of TCP and UDP upper layer protocols.

Claim 17 (Cancelled)

Claim 18 (Currently Amended): The method as recited in claim 2 wherein the actual networked application codes further utilizes a communication style selected from the group consisting of point-to-point, anycast, multicast and broadcast.

Claim 19 (Original): The method as recited in claim 2 wherein the network simulator comprises a plurality of network simulators.

Claim 20 (Previously Presented): The method as recited in claim 2 wherein the server comprises a plurality of servers.

Claim 21 (Currently Amended): The method as recited in claim 2 wherein the mapping of the actual networked application code to simulated network node is dynamic.

Claim 22 (Original): The method as recited in claim 2 wherein the network simulator executes in real-time.

Claim 23 (Original): The method as recited in claim 2 wherein the execution time of the network simulator is configurable.

Claim 24 (Currently Amended): The method as recited in claim 2 wherein the client interfaces and the servers are implemented on separate hardware.

Claim 25 (Currently Amended): The method as recited in claim 2 wherein the networked application codes are ~~is~~ executed in parallel over a distributed system.

Claim 26 (Original): The method as recited in claim 1 wherein the server is a plug in to the simulator.

Claim 27 (Original): The method as recited in claim 2 wherein the server is a plug in to the simulator.

Claims 28-32 (Cancelled)

Claim 33 (Currently Amended): A computer system for virtually simulating actual networked applications within a network simulation comprising:

a plurality of clients, each client having a client interface, the client interface communicating with an associated actual networked application code executing on the client;

a network simulator that simulates a network of communicating nodes~~including a plurality of simulated nodes~~;

a server, the server having functionality for interfacing to the network simulator;

and wherein each client communicates with the server over a network,

and wherein each client executes the actual networked application code and the client interface so that the actual networked application code can communicate with the server,

and wherein each ~~the~~ client interface maps its associated ~~the~~ actual networked application code to one of the simulated nodes so that communication from the networked application code now appears to originate from the simulated node~~, and~~ ;

and wherein each client interface. upon receiving messages or packets from its associated actual networked application code destined for the network simulator, inserts management information into the ~~and extracts~~ messages or packets from the actual networked application code, and forwards the messages or packets including the management information to the server;

and wherein the server, upon receiving messages or packets from one of the networked application codes, creates, in accordance with the mapping of said one of the networked application codes, inserts a simulated message or packet of the same size and content into the network simulation of the network simulator;

and wherein the server, upon receiving messages or packets from the network simulation destined for one of the networked application codes, inserts management information into the messages or packets from the network simulator, and forwards the messages or packets including said server inserted management information to the client interface with which said one of the networked application codes is associated;

and wherein each client interface. upon receiving messages or packets from the server destined for its associated actual networked application code, strips server inserted management information from the messages or packets, and forwards the messages or packets without the management information to the actual networked application code.

Claim 34 (Previously Presented): The system according to claim 33, wherein server has functionality for providing message or packet transfer among simulated nodes and/or networked application codes.